

## CLAIMS

1. A dietary supplement comprising:  
a capsule comprising a nutritionally effective amount of isolated and purified galactose, glucose, mannose, N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine and xylose.
2. The dietary supplement of claim 1, wherein the supplement further comprises rice flour.
3. The dietary supplement of claim 1, wherein the composition further comprises a flowing agent and a lubricant.
4. The dietary supplement of claim 1, wherein the galactose, glucose, mannose, N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, xylose and rice flour are present in the composition in a weight ratio of about 1:1:1:1:1:1:1:1:8.
5. A dietary supplement comprising:  
a nutritionally effective amount of isolated and purified acetylated mannose; and  
at least five isolated and purified saccharides selected from: galactose, glucose, mannose, xylose, N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, arabinose, glucuronic acid, galacturonic acid, iduronic acid and arabinogalactan.
6. The dietary supplement of claim 5, wherein the five isolated and purified saccharides are powdered.
7. The dietary supplement of claim 5, wherein the five isolated and purified saccharides are essential saccharides.
8. The dietary supplement of claim 5, wherein the five isolated and purified saccharides further comprise glucosamine and rhamnose.

9. A dietary supplement composition, comprising:  
a nutritionally effective amount of at least two powdered saccharides,  
wherein at least one of the saccharides is selected from a first group of saccharides consisting of: arabinogalactan, glucosamine, rhamnose and acetylated mannose; and  
wherein at least one of the saccharides is selected from a second group of saccharides consisting of: N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, arabinose, glucuronic acid, galacturonic acid, iduronic acid, galactose, glucose, mannose and xylose.
10. A dietary supplement comprising:  
a nutritionally effective amount of at least six powdered monosaccharides,  
wherein at least one of the powdered saccharides is selected from a first group of saccharides consisting of: galactose, glucose, mannose, xylose and acetylated mannose; and  
wherein at least one of the powdered saccharides is selected from a second group of saccharides consisting of: N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, arabinose, glucuronic acid, galacturonic acid, iduronic acid and arabinogalactan.
11. A dietary supplement comprising:  
a nutritionally effective amount of at least six essential saccharides.
12. The dietary supplement of claim 11, wherein at least one of the essential saccharides is selected from a first group of saccharides consisting of: galactose, glucose, mannose, xylose and acetylated mannose.
13. The dietary supplement of claim 11, wherein the essential saccharides are selected from a second group of saccharides consisting of: N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, arabinose, glucuronic acid, galacturonic acid, iduronic acid and arabinogalactan.

14. The dietary supplement of claim 11, wherein the six essential saccharides are provided at a weight percent of between about 0.1 and about 75 weight percent.
15. The dietary supplement of claim 11, wherein the six essential saccharides are provided at a weight percent of between about 1 and about 48 weight percent.
16. The dietary supplement of claim 11, wherein the six essential saccharides are provided at a weight percent of between about 1 and about 25 weight percent.
17. The dietary supplement of claim 11, wherein the six essential saccharides are powdered.
18. The dietary supplement of claim 11, wherein the six essential saccharides are dissolved in a liquid.
19. The dietary supplement of claim 11, wherein the six essential saccharides are encapsulated.
20. The dietary supplement of claim 11, wherein the six essential saccharides comprise acetylated mannose, glucosamine, arabinogalactan, predigested gum ghatti, predigested tragacanth gum and predigested corn starch.
21. The dietary supplement of claim 11, wherein the six essential saccharides at a 1:1:1:1:1:1 ratio.
22. The dietary supplement of claim 11, wherein the six essential saccharides are selected from the group consisting of galactose, glucose, mannose, xylose and acetylated mannose, N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, arabinose, glucuronic acid, galacturonic acid, iduronic acid and arabinogalactan.
23. The dietary supplement of claim 11, wherein the six essential saccharides are bioavailable.

24. A dietary supplement comprising:
- a composition comprising a first and a second, isolated and purified saccharide,
  - wherein the first saccharide is selected from a first group of saccharides consisting of: arabinogalactan, glucosamine, rhamnose and acetylated mannose; and
  - wherein the second saccharide is selected from a second group of saccharides consisting of: N-acetylneuraminic acid, fucose, N-acetylgalactosamine, N-acetylglucosamine, arabinose, glucuronic acid, galacturonic acid, iduronic acid and arabinogalactan,
  - wherein the first and second saccharides are each provided in an amount sufficient to provide a nutritionally effective amount.